

CORRES CONTROL
OUTGOING LTR NO

DOE ORDER # 3200-1
94 RF 05710

EG&G ROCKY FLATS



G&G ROCKY FLATS, INC
ROCKY FLATS PLANT, P O BOX 464, GOLDEN, COLORADO 80402-1464 • (303) 966-7000

DIST	LTR	ENC
AMARAL M E		
BERMAN H S		
BRANCH D B		
CARNIVAL G J		
COPP R D		
DAVIS J G		
FERRERA D W		
HANNI B J		
HARMAN L K		
HEALY T J		
HEDAHL T		
HILBIG J G		
HUTCHINS N M		
KELL R E		
KIRBY W A		
KUESTER A W		
MAHAFFEY J W		
MANN H P		
MARX G E		
MCDONALD M M		
McKENNA F G		
MONTROSE J K		
MORGAN R V		
POTTER G L		
PIZZUTO V M		
RISING T L		
SANDLIN N B		
SETLOCK G H		
STEWART D L		
STIGER S G		
SULLIVAN M T		
SWANSON E R		
WILKINSON R B		
WILSON J M		
WYANT R D		

May 18, 1994

94-RF-05710

Richard S Schassburger
Environmental Restoration Division
DOE/RFFO

Attn Jon Dion, Environmental Protection Division

NATIONAL ENVIRONMENTAL POLICY ACT DOCUMENTATION FOR THE WELL ABANDONMENT
AND REPLACEMENT PROGRAM 1994 SUPPLEMENTAL WELLS - MEL-053-94

Attached is the transmittal letter as well as a copy of an Environmental Checklist (EC) for the subject project. The EC has been reviewed by the Rocky Flats Plant National Environmental Policy Act (NEPA) Compliance Committee. The committee, together with the Ecology and NEPA Division, has recommended a categorical exclusion for the project as noted on the attached Environmental Restoration Review Form. A draft categorical exclusion determination has also been included for your review. Additionally, an electronic copy of the draft determination has been made available to the NEPA Compliance Officer at the Rocky Flats Field Office.

Please request a final NEPA determination for this project from the NEPA Compliance Officer. If you have any questions or need additional information, please contact Steve Nesta of Ecology and NEPA Division at extension 6386 or Bill Moore at extension 8132.

U M Hadden x
CR Konwinski x
SH Singer x
MR Woods x
SG Stigler xx
CORRES CONTROL x
ADMIN RECORDING x
TRAFFIC
PATS/T130G

Mark E Levin
Mark E Levin
Manager
Geosciences

MRW bll

Orig and 1 cc - J Dion

CLASSIFICATION
UCNI
UNCLASSIFIED
CONFIDENTIAL
SECRET

Enclosures
As Stated (4)

AUTHORIZED CLASSIFIER
SIGNATURE

OC
R D Lindberg - SAIC/RFP

DATE 5/18/94
IN REPLY TO RFP CC NO

ACTION ITEM STATUS
☐ PARTIAL/OPEN
☐ CLOSED
LTR APPROVALS
ORIG & TYPIST INITIALS
new bll

ADMIN RECCRD

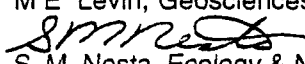
SW-SW-A-03020

1/18

INTEROFFICE CORRESPONDENCE

DATE May 9, 1994 5440 1

TO M E Levin, Geosciences, Bldg 080, X8580

FROM  S M Nesta, Ecology & National Environmental Policy Act Division, Bldg T130J, X6386

SUBJECT NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) DOCUMENTATION FOR WELL ABANDONMENT AND REPLACEMENT PROGRAM (WARP) - FY94 SUPPLEMENTAL WELLS - SMN-301-94

Attached is an Environmental Checklist for the subject project. This checklist has been reviewed by the Rocky Flats Plant NEPA Compliance Committee. The Committee, together with the Ecology and NEPA Division, recommends that the project is eligible for a categorical exclusion from further NEPA documentation requirements, as noted on the attached EC Review Form.

Also attached is a draft Categorical Exclusion for use by the DOE, RFFO NEPA Compliance Officer. Please review the project description portion of the Environmental Checklist and the Categorical Exclusion for accuracy and completeness. Pending any changes, the documents are ready for transmittal to your DOE counterpart on this project, who should forward them and a request for a final NEPA determination, to the RFFO NEPA Compliance Officer.

To assist you in this procedure, a sample transmittal letter from you to your DOE counterpart is attached. In order to provide control and tracking of NEPA issues, we request that we be copied on your transmittal to RFFO.

Please contact me, at X6386, or Bill Moore, at X8132, if you have any questions or need further information.

NLM c/jg

Attachments
As Stated (3)

cc
T P Lovseth
N L Montgomery
W A Moore
File

EG&G ROCKY FLATS
NEPA COMPLIANCE COMMITTEE
ENVIRONMENTAL CHECKLIST REVIEW FORM

NEPA Record # 491

EC Date 5/5/94

Project Name Well Abandonment and Replacement Program - FY94 Supplemental Wells

Authorization or EJO# _____ Project PA T.P. Lovseth

Initiating Line Manager M Levin

NEPA compliance Committee Review (Sign & date applicable space)

	CX Recommended	Date	ADM Recommended
Environ Doc	<u>Bill Moore</u>	<u>5/5/94</u>	_____
Eng and Proj Mgmt	<u>Pete Weiss</u>	<u>5-5-94</u>	_____
General Counsel	<u>Kimberly Mac</u>	<u>5/5/94</u>	_____
Fac Safety Eng	<u>Paul B. O'Quinn</u>	<u>5/5/94</u>	_____
Comments			

CEQ Section 1506 1(c) Review

Yes

No

1 Project justified independently

✓

2 Project will prejudice program decision

✓

10 CFR 1022 Review (wetlands issue) needed

✓

NCC Recommendation ✓ CX recommended

_____ ADM recommended

END Mgr Approval/Date SM [Signature] 5/10/94

ROCKY FLATS PLANT
ECOLOGY & NATIONAL ENVIRONMENTAL POLICY ACT DIVISION

ENVIRONMENTAL CHECKLIST

1	<u>Project/Activity Name</u>	WARP - FY94 Supplemental Wells
2	<u>Date</u>	May 5, 1994
3	<u>DR/NC Number</u>	94-491
4	<u>Charge Number</u>	986692-00
5	<u>Work Package Number</u>	61203
6	<u>ADS Number (E&WM only)</u>	6740
7	<u>EG&G Project Administrator</u>	T P Lovseth
8	<u>DOE Program Sponsor</u>	J Dion
9	<u>Initiating Line Manager</u>	M Levin
10	<u>Total Estimated Cost</u>	\$200,000
11	<u>Project/Activity Description Summary</u>	

Rocky Flats Field Office proposes to install 10 supplemental monitoring wells as part of its FY94 Well Abandonment and Replacement Program (WARP). The WARP is a basic maintenance program for the Rocky Flats Groundwater Monitoring Program (GMP). Implementation of WARP would achieve the general objective of ensuring the viability of groundwater monitoring wells and piezometers where sample and water level readings are suspected of not being representative of subsurface conditions.

Two (2) wells would be located offsite, east of Indiana Street, along Walnut Creek (Figure 1). Installation of these wells is in response to a plutonium detection in groundwater from Boundary Well #41691 and to concerns expressed by the city of Broomfield, the city of Westminster, and the Colorado Department of Health.

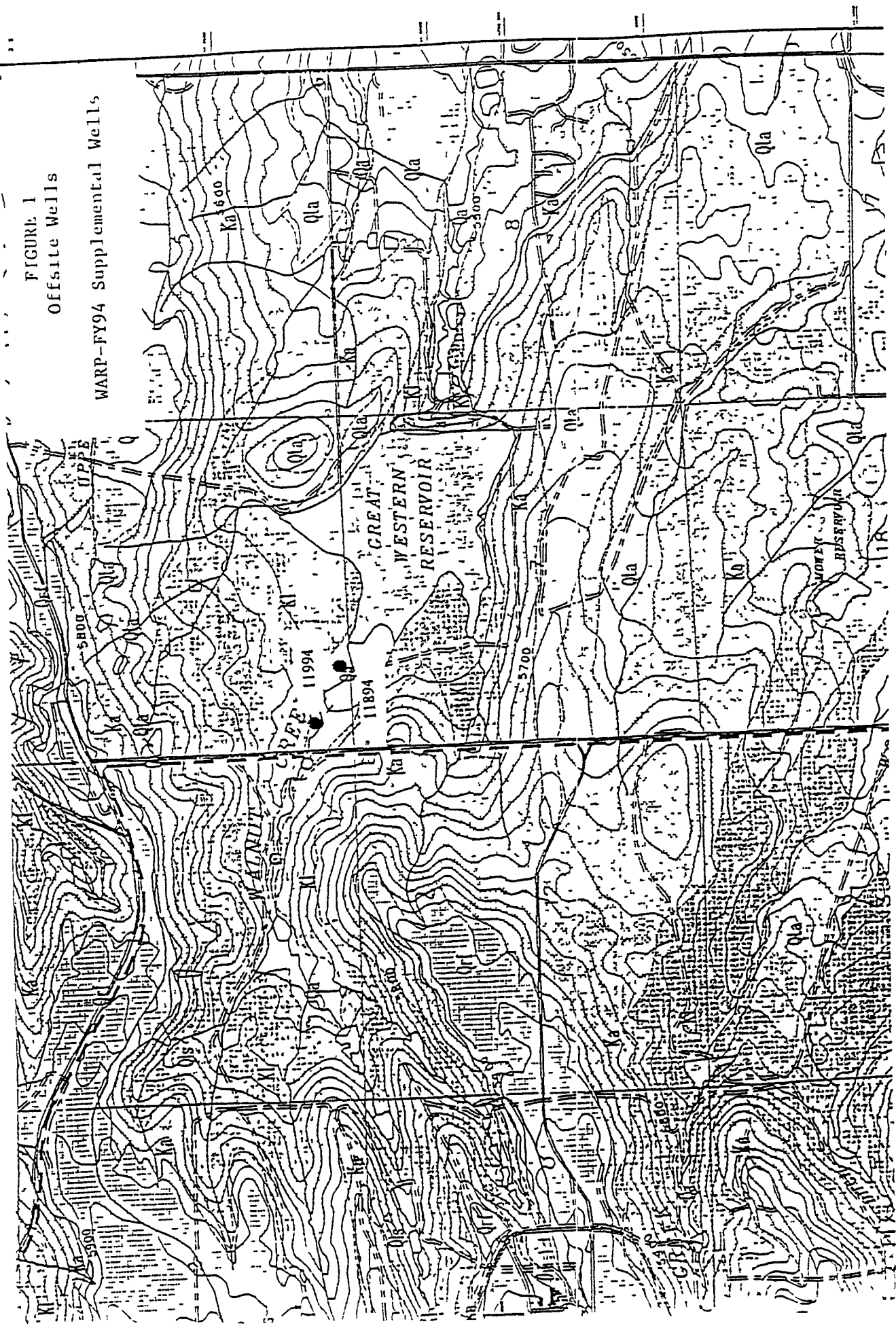
Eight (8) wells would be located within the boundaries of Rocky Flats Plant (Figure 2). Installation of these supplemental wells is proposed due to the following: a) plutonium was detected in groundwater collected from a boundary well, and b) a recent evaluation of the GMP indicates groundwater monitoring deficiencies, specifically inadequate monitoring along the Walnut Creek and Woman Creek drainages.

Reviewed for Classification
By [Signature]
Date 5/10/94

FIGURE 1

Offsite Wells

WARP-FY94 Supplemental Wells



Item	Quantity	Unit Price	Total Price
1. 1000	1000	1.00	1000.00
2. 500	500	0.50	250.00
3. 250	250	0.25	62.50
4. 125	125	0.125	15.625
5. 62.5	62.5	0.0625	3.90625
6. 31.25	31.25	0.03125	0.9765625
7. 15.625	15.625	0.015625	0.244140625
8. 7.8125	7.8125	0.0078125	0.061328125
9. 3.90625	3.90625	0.00390625	0.015234375
10. 1.953125	1.953125	0.001953125	0.003828125
11. 0.9765625	0.9765625	0.0009765625	0.000953125
12. 0.48828125	0.48828125	0.00048828125	0.00023828125
13. 0.244140625	0.244140625	0.000244140625	0.000119140625
14. 0.1220703125	0.1220703125	0.0001220703125	0.0000595703125
15. 0.06103515625	0.06103515625	0.00006103515625	0.00002978515625
16. 0.030517578125	0.030517578125	0.000030517578125	0.000014892578125
17. 0.0152587890625	0.0152587890625	0.0000152587890625	0.0000074462890625
18. 0.00762939453125	0.00762939453125	0.00000762939453125	0.00000372314453125
19. 0.003814697265625	0.003814697265625	0.000003814697265625	0.000001861572265625
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23. 0.0002384185791015625	0.0002384185791015625	0.0000002384185791015625	0.0000001163482666015625
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27. 0.00001490116119384765625	0.00001490116119384765625	0.00000001490116119384765625	0.00000000727176666259765625
28. 0.000007450580596923828125	0.000007450580596923828125	0.000000007450580596923828125	0.000000003635883331298828125
29. 0.0000037252902984619140625	0.0000037252902984619140625	0.0000000037252902984619140625	0.0000000018179416656494140625
30. 0.00000186264514923095703125	0.00000186264514923095703125	0.00000000186264514923095703125	0.00000000090897083282470703125
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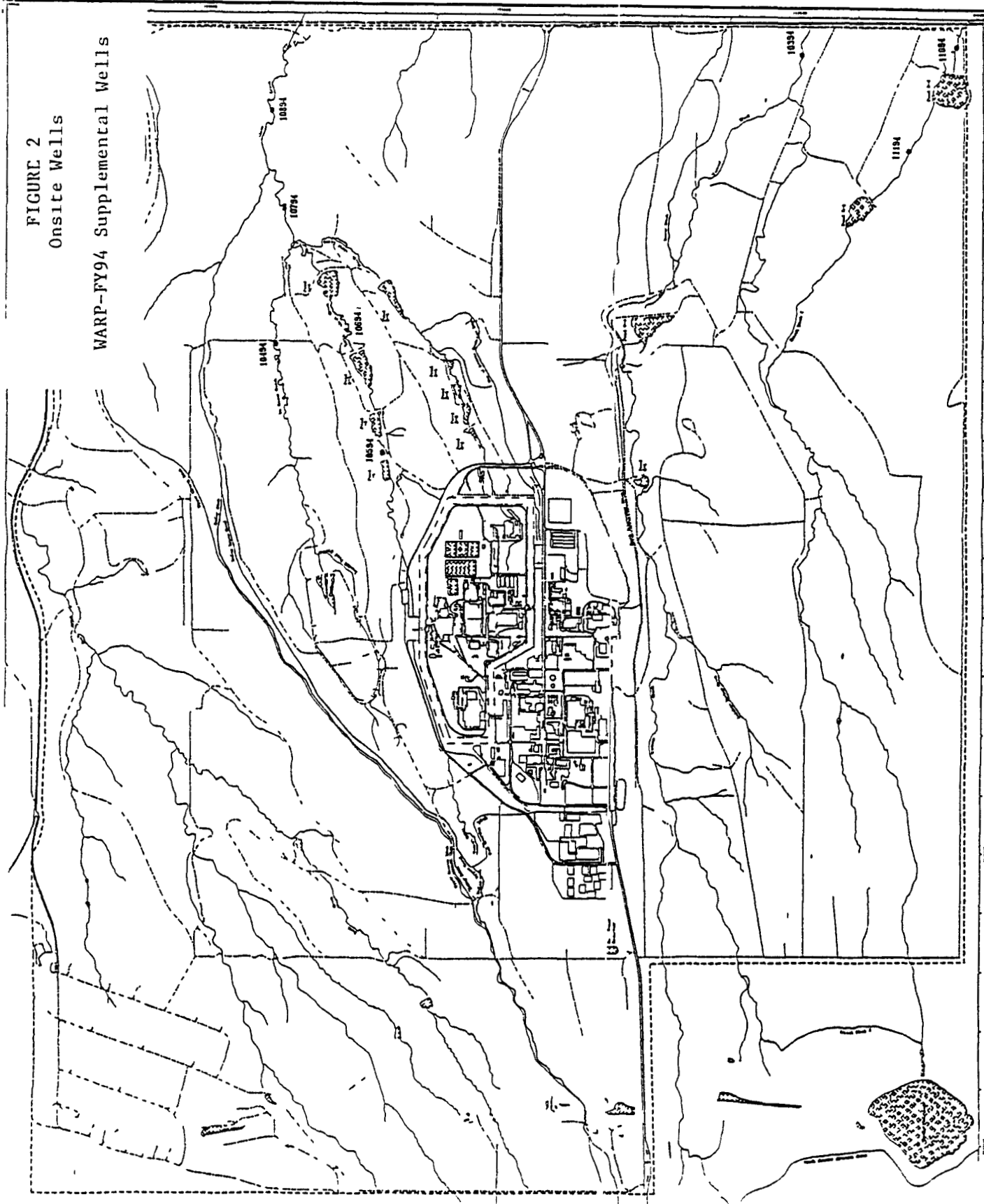
New York University
 Library
 100 10th Ave
 New York, NY 10018

Designed by

EDGE ROCKY FLATS

Rocky Flats Plant
P.O. Box 484
Golden, Colorado

FIGURE 2
Onsite Wells
WARP-FY94 Supplemental Wells



The field work described herein is in addition to, and does not supersede, the previous FY94 WARP project work, which received a Categorical Exclusion (RFO/CX03-94) on April 8, 1994

Because the program is aimed at characterizing groundwater some of the wells (thus, drilling activity) would take place in the Walnut and Woman Creek drainages, which are within 100-year floodplain. The proposed actions would not, however, take place in wetlands. Vehicles would use established roads or tracks, to the maximum extent possible, to gain access to each well site. Environmental impact would be limited, primarily, to downed vegetation and tire impressions in the immediate vicinity of the well site.

Borehole Drilling Procedures and Sampling Methodology Ten (10) boreholes would penetrate surficial materials to the surface of weathered bedrock and would be completed as 2-inch-diameter alluvial groundwater monitoring wells with a 2 to 3 foot locking surface protective casing above the ground. The sampling program would continue for 12 months, at which time the sampling results would be evaluated and a decision would be made as to whether to incorporate a well into the GMP or to abandon the well.

Drilling equipment would consist of the drill rig equipped with balloon tires, equipment truck, and portable geological laboratory. Disturbance to vegetation and soil would be minimal, approximately 200 square feet at each well site. Heavy equipment would use existing dirt roads except while near each proposed well site.

Borehole drilling would be performed with a truck-mounted hollow stem auger rig. Boreholes would be drilled 6 inches in diameter. Drilling with the hollow stem auger rig into Rocky Flats Alluvium would be done in 1-foot runs to maximize core recovery in cobbly material.

As the drill bit is advanced, drill cuttings would be brought to the surface, sampled, and containerized in 30-gallon drums for storage and ultimate disposal. All drilling and sampling would be performed according to RFP Operating Procedures *GT 02 Drilling and Sampling Using Hollow Stem Auger Techniques*. Continuous core would be collected for lithologic description and logged according to *GT 01 Logging Alluvial and Bedrock Material*. When feasible, the continuous coring method would be used to collect samples, drive sampling would be used when warranted by field conditions.

Samples collected for geotechnical analysis would be collected in 9-inch stainless steel sleeves, or as specified by the receiving laboratory. Soil samples would be collected from ground surface to total depth. To collect composite samples, the sample material would be placed in a safe location, out of direct sunlight, until the appropriate number of core samples have been collected. The recovered material would be classified, logged, peeled, disaggregated, and mixed into a 6-foot composite and placed in appropriate containers for lab analysis.

Drilling and sampling equipment decontamination would be performed according to *FO 03 General Equipment Decontamination*, *FO 04 Heavy Equipment Decontamination*, and *FO 08 Handling of Drilling Fluids and Cuttings*. Subsequent to sample collection, the exterior of the sample containers would be decontaminated and the containers placed in coolers lined with a plastic bag designated for sample transportation. Blue ice or its equivalent would be placed in

each cooler. Official custody of samples would be maintained and documented from the time of collection until the time that valid analytical results have been obtained or the lab has been authorized to dispose of the sample.

All drilling equipment would be decontaminated prior to being taken to the work site. The drill rig would be decontaminated between each monitoring well installation. Sampling equipment would be decontaminated between samples. Equipment would be inspected for evidence of fuel oil or hydraulic system leaks. If lubricants are required for downhole equipment, only pure vegetable oil would be used. All sampling equipment would be separated from the ground surface with clear plastic sheeting.

Monitoring Well Installation Procedures Two-inch-diameter groundwater monitoring wells would be constructed in all soil borings as specified in *GT 06 Monitoring Wells and Piezometer Installation*. Well casings would consist of new, threaded flush-joint Schedule 40 PVC. The well casing would extend from the top of the well screen to approximately 2 feet above ground surface. Well screens would consist of new, threaded PVC pipe with 0.010-inch factory-machined slots or wrapped screen. Special care would be taken to avoid cross contamination between upper and lower aquifers, primarily by following *GT 03 Isolating Bedrock from Alluvial with Grouted Surface Casing*.

Monitoring Well Development and Sampling Procedures. Monitoring wells would be developed for groundwater sampling. Well development and groundwater sampling would be conducted according to the following procedures: *GW 02 Well Development*, *GW 06 Field Measurement of Groundwater Field Parameters*, *FO 05 Handling of Purge and Development Water*, and *FO 07 Handling of Decontamination Water and Wash Water*.

Monitoring well development is the process by which the well drilling fluids and mobile particulates are removed from within and adjacent to newly installed wells. The objective of a complete well development would be to provide groundwater inflow that is as physically and chemically representative of the aquifer as possible. Well development would be conducted as soon as possible after well installation, but no sooner than 48 hours after grouting and pad installation are completed. An inertial pump or bottom discharge/filling bailer would be used in development activities.

Well Abandonment. In abandoning wells, a truck-mounted drill rig would be driven to each well site where access is favorable. The rig would be used to remove surface and well casings and adjacent geologic material. However, at some locations within the Industrial Area, space to operate a drill rig would be limited. Therefore, wells in this situation would typically be abandoned in place, that is, the casing would not be removed from the well. Whether the casing would be removed or left in place, all wells would be filled with bentonite grout to ensure that potentially contaminated water cannot move between water-bearing strata via the well. A 2-foot square concrete surface seal and metal marker would mark the location of the abandoned well.

		<u>YES</u>	<u>NO</u>	<u>Addl Notes</u>
12	Statutes applicable			
12 1	Will the project require/potentially require a permit(s) application or permit modification(s) under			
	A Clean Air Act?		✓	
	B Colo Air Quality Control Commission Regulation 3?		✓	
	C Clean Water Act?		✓	
12 2	Does the project involve RCRA? [If "NO," skip to C]		✓	
	A Will a RCRA permit or modification be required?			
	B Does the project include a removal?			
	C Does the project include a RCRA closure?			
	A full closure?			
	A partial closure?			
	D Does the project include excavation or capping to meet RCRA requirements?			
	E Will the cost and duration stay within \$2 million and 12 months? [Explain in "VI Project/Activity Description"]			
12 3	Does the project involve CERCLA? [If "NO," skip to D]		✓	
	A Does the project include CERCLA removal activity?			
	B Will the cost and duration stay within \$2 million and 12 months? [Explain in "VI Project/Activity Description"]			
12 4	Does the project threaten to violate DOE Orders or statutory, regulatory, or permit requirements?		✓	
12 5	Will the action be in or near an Individual Hazardous Substance Site (IHSS)?	✓		see Note 1
12 6	Does the project potentially impact threatened or endangered species or habitat, or be subject to the following regulations			
	A the Migratory Bird Treaty Act?		✓	
	B the Bald and Golden Eagle Protection Act?		✓	
	C the Fish and Wildlife Coordination Act?		✓	
	D Colorado Non-game Program?		✓	
	E Endangered Species Conservation Act?		✓	
13	Will this project construct or require a new or expanded waste disposal, recovery, storage, or treatment facility?		✓	
14.	Is the project needed for IAG, AIP, FFCA, or other federal or state agreements? [Specify and explain schedule urgency/deadlines in "VI Project/Activity Description"]	✓		see Note 2
15.	Is the project			
15 1	A new process, building, etc ?		✓	
15 2	A modification to an existing process, building, etc ?		✓	
15 3	An installation of capital equipment or machinery?		✓	

		<u>YES</u>	<u>NO</u>	<u>Addl. Notes.</u>
16	Location items			
16 1	Will the project result in, or have the potential to result in, long term changes to the environment?		√	
16 2	Will the action take place in a wetland or floodplain?	√		see Note 3
17	Will the project result in changes and/or disturbances to the existing conditions of the following			
17 1	Noise levels?		√	
17 2	Air emissions?		√	
17 3	Liquid effluents?		√	
17 4	Solid wastes?	√		see Note 4
17 5	Radioactive wastes (including disturbed/excavated contaminated soil)?	√		see Note 4
17 6	Hazardous waste?	√		see Note 4
17 7	Mixed waste (radioactive and/or hazardous)	√		see Note 4
17 8	Chemical or petroleum product storage?		√	
17 9	Water use (the withdrawal of groundwater or the withdrawal/diversion of surface water)?	√		see Note 5
17 10	Drinking water system?		√	
17 11	Soil movement outside of facility fences or beyond IHSS boundaries?	√		see Note 6
17 12	Site clearing, excavation, or other physical alterations to grade?		√	
18	Will the project threaten public health and safety?		√	
19.	Will the project have possible effects on the environment which are likely to be highly controversial?		√	
20.	Will the project establish a precedent for future actions that will have significant effects, or represent a "decision in principle" about a future consideration?		√	
21.	Will the project be substantially related to other actions that have individually-insignificant, but cumulatively-significant, impacts?		√	
22	Will the project adversely affect designated federal, state, or local			
22 1	Natural areas?		√	
22 2	Prime agricultural land?		√	
22 3	Special water sources?		√	
22 4	Historical, archaeological, or architectural sites?		√	
23	Have pollution prevention measures been considered?	√		see Note 7

Checklist Notes

- 1 Because the program is aimed at characterizing contaminated sites, most of the activity would take place in various IHSSs within OUs 3, 5, and 6
- 2 DOE-RFFO is responding to concerns expressed by the city of Broomfield, the city of Westminster, the Colorado Department of Health
- 3 Because the program is aimed at characterizing groundwater, some of the wells (thus, drilling activity) would take place in the Walnut and Woman Creek drainages, which are within 100-year floodplain. The proposed actions would not, however, take place in wetlands
- 4 Certain borehole drilling, well drilling, and water/soil sampling could produce media contaminated with hazardous and/or radioactive substances. All such media would be handled and disposed of in accordance with applicable procedures and regulations. Individual sample sizes and cumulative quantities of contaminated media would be relatively small.
- 5 Water would be withdrawn from wells in small (e.g., quart, gallon) quantities over a period of time. Water samples would be analyzed for their constituents and disposed of in accordance with applicable procedures and regulations.
- 6 Soil and core samples would be removed to onsite or offsite laboratories for analysis of their constituents. Individual soil sample sizes would be small (e.g., pounds). Core sizes would generally be 1 1/2 inches in diameter and as long as the borehole is deep. Soil and core samples would be disposed of in accordance with applicable procedures and regulations.
- 7 Surface casing shall be installed to prevent cross-contamination between potentially contaminated near-surface soil and the soil adjacent to the well screen.

* * * * *

EC Prepared By: NLM
Organization: END

Extension: x3568
Date May 5, 1994

SUBPART D
CATEGORICAL EXCLUSION (CX) DETERMINATION - RFO/CX 00-94

Proposed Action Well Abandonment and Replacement Program (WARP) - FY94
 Supplemental Wells

Location Operable Units 3, 5, and 6, Rocky Flats Plant

Proposed by U S Department of Energy, Rocky Flats Plant, Golden, Colorado

Description of the Proposed Action:

Rocky Flats Field Office proposes to install 10 supplemental monitoring wells as part of its FY94 Well Abandonment and Replacement Program (WARP) at Rocky Flats Plant. The WARP is a basic maintenance program for the Rocky Flats Groundwater Monitoring Program (GMP). Implementation of WARP would achieve the general objective of ensuring the viability of groundwater monitoring wells and piezometers where sample and water level readings are suspected of not being representative of subsurface conditions.

Two (2) wells would be located offsite, east of Indiana Street, along Walnut Creek (Figure 1). Installation of these wells is in response to a plutonium detection in groundwater from Boundary Well #41691. The Rocky Flats Field Office has proposed the supplemental wells in response to concerns expressed by the city of Broomfield, the city of Westminster, and the Colorado Department of Health.

Eight (8) wells would be located within the boundaries of Rocky Flats Plant (Figure 2). Installation of these supplemental wells is proposed due to the following: a) plutonium was detected in groundwater collected from a boundary well, and b) a recent evaluation of the GMP indicates groundwater monitoring deficiencies, specifically inadequate monitoring along the Walnut Creek and Woman Creek drainages.

The field work described herein is in addition to, and does not supersede, the previous FY94 WARP project work and received a Categorical Exclusion (RFO/CX03-94) on April 8, 1994.

Because the program is aimed at characterizing groundwater, some of the wells (thus, drilling activity) would take place in the Walnut and Woman Creek drainages, which are within 100-year floodplain. The proposed actions would not, however, take place in wetlands. Vehicles would use established roads or tracks, to the maximum extent possible, to gain access to each well site. Environmental impact would be limited, primarily, to downed vegetation and tire impressions in the immediate vicinity of the well site.

Because the program is aimed at characterizing contaminated sites, most of the activity would take place in various IHSSs within OUs 3, 5, and 6. Certain borehole drilling, well drilling, and water/soil sampling could produce media contaminated with hazardous and/or radioactive substances. All such media would be handled and disposed of in accordance with applicable procedures and regulations. Individual sample sizes and cumulative quantities of contaminated media would be relatively small.

FIGURE 1
Off-site Wells

WARP-FY94 Supplemental Wells

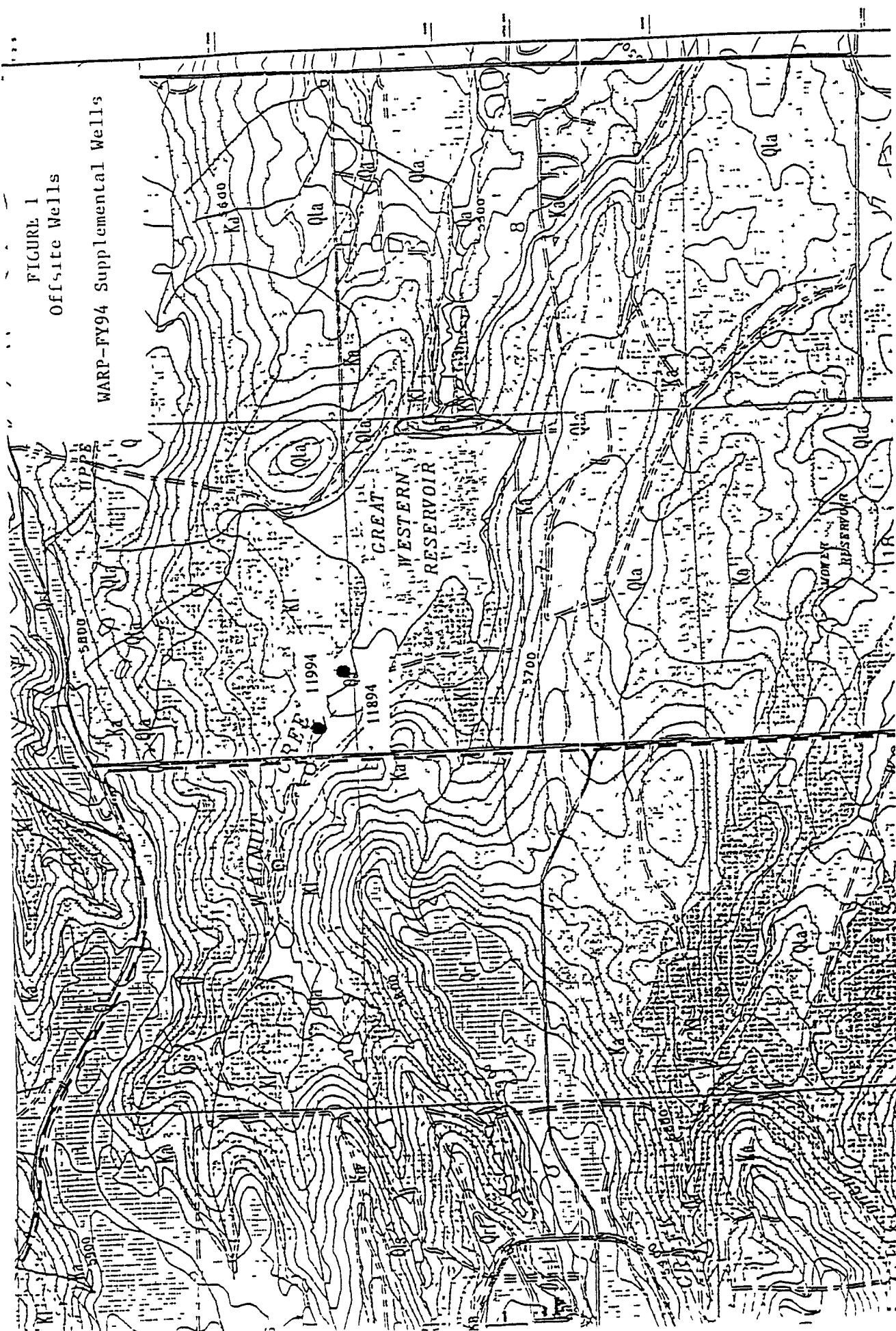
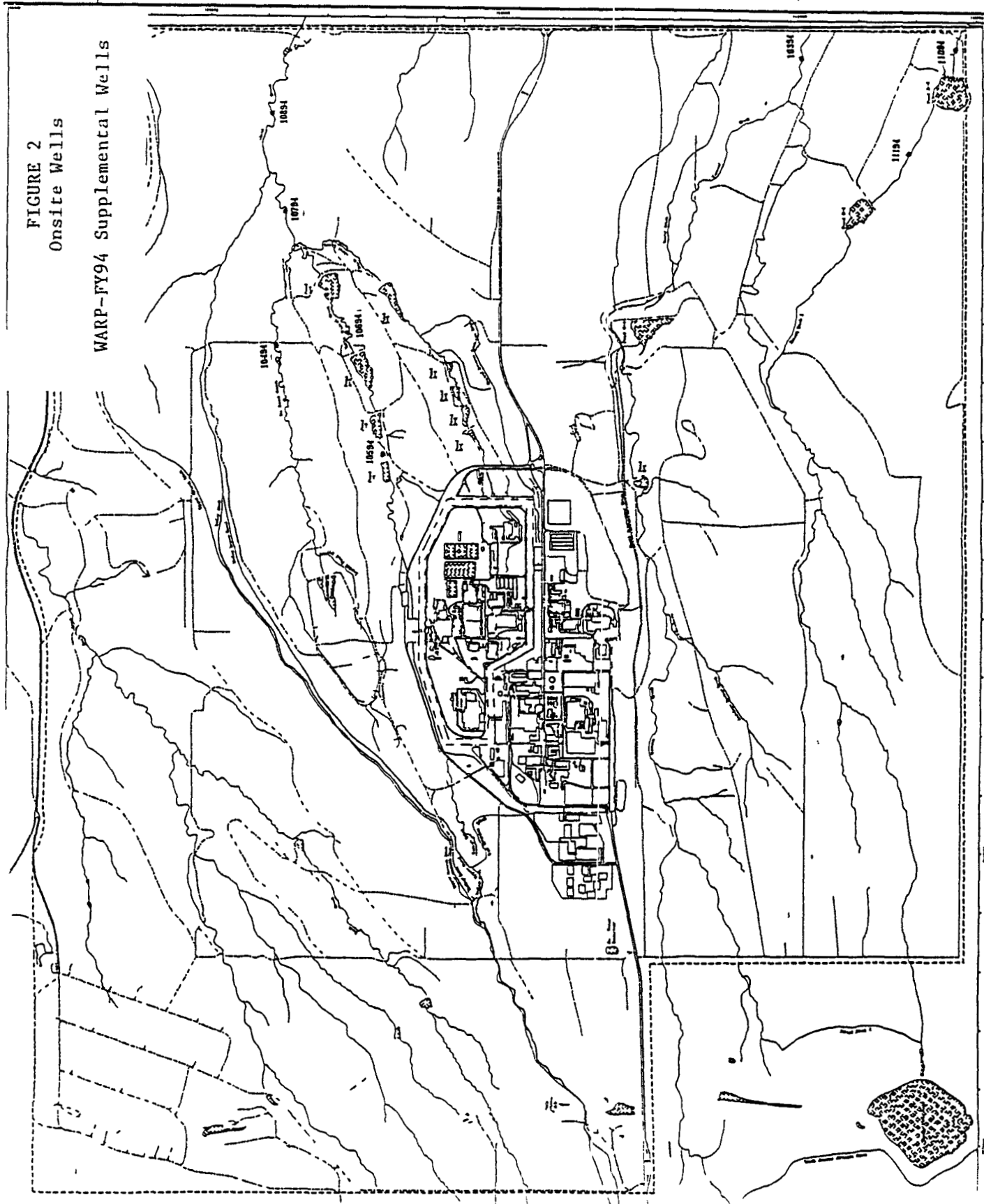


FIGURE 2
Onsite Wells
WARP-FY94 Supplemental Wells



1950 - 1951

1. DATE
 2. TIME
 3. LOCATION

349 pages

EDGE ROCKY FLATS

Rocky Flats Plant
P.O. Box 404
Gallatin, Colorado

F.D. 302 (Rev. 4-15-64)
Gallatin, Colorado 90402-0484

Borehole Drilling Procedures and Sampling Methodology Ten (10) boreholes would penetrate surficial materials to the surface of weathered bedrock and would be completed as 2-inch-diameter alluvial groundwater monitoring wells with a 2 to 3 foot locking surface protective casing above the ground. The sampling program would continue for 12 months, at which time the sampling results would be evaluated and a decision would be made as to whether to incorporate a well into the GMP or to abandon the well.

Drilling equipment would consist of the drill rig equipped with balloon tires, equipment truck, and portable geological laboratory. Disturbance to vegetation and soil would be minimal, approximately 200 square feet at each well site. Heavy equipment would use existing dirt roads except while near each proposed well site.

Borehole drilling would be performed with a truck-mounted hollow stem auger rig. Boreholes would be drilled 6 inches in diameter. Drilling with the hollow stem auger rig into Rocky Flats Alluvium would be done in 1-foot runs to maximize core recovery in cobbly material.

As the drill bit is advanced, drill cuttings would be brought to the surface, sampled, and containerized in 30-gallon drums for storage and ultimate disposal. All drilling and sampling would be performed according to RFP Operating Procedures *GT 02 Drilling and Sampling Using Hollow Stem Auger Techniques*. Continuous core would be collected for lithologic description and logged according to *GT 01 Logging Alluvial and Bedrock Material*. When feasible, the continuous coring method would be used to collect samples, drive sampling would be used when warranted by field conditions.

Samples collected for geotechnical analysis would be collected in 9-inch stainless steel sleeves, or as specified by the receiving laboratory. Soil samples would be collected from ground surface to total depth. To collect composite samples, the sample material would be placed in a safe location, out of direct sunlight, until the appropriate number of core samples have been collected. The recovered material would be classified, logged, peeled, disaggregated, and mixed into a 6-foot composite and placed in appropriate containers for lab analysis.

Drilling and sampling equipment decontamination would be performed according to *FO 03 General Equipment Decontamination*, *FO 04 Heavy Equipment Decontamination*, and *FO 08 Handling of Drilling Fluids and Cuttings*. Subsequent to sample collection, the exterior of the sample containers would be decontaminated and the containers placed in coolers lined with a plastic bag designated for sample transportation. Blue ice or its equivalent would be placed in each cooler. Official custody of samples would be maintained and documented from the time of collection until the time that valid analytical results have been obtained or the lab has been authorized to dispose of the sample.

All drilling equipment would be decontaminated prior to being taken to the work site. The drill rig would be decontaminated between each monitoring well installation. Sampling equipment would be decontaminated between samples. Equipment would be inspected for evidence of fuel oil or hydraulic system leaks. If lubricants are required for downhole equipment, only pure vegetable oil would be used. All sampling equipment would be separated from the ground surface with clear plastic sheeting.

Monitoring Well Installation Procedures. Two-inch-diameter groundwater monitoring wells would be constructed in all soil borings as specified in *GT 06 Monitoring Wells and Piezometer Installation*. Well casings would consist of new, threaded flush-joint Schedule 40 PVC. The well casing would extend from the top of the well screen to approximately 2 feet above ground surface. Well screens would consist of new, threaded PVC pipe with 0.010-inch factory-machined slots or wrapped screen. Special care would be taken to avoid cross contamination between upper and lower aquifers, primarily by following *GT 03 Isolating Bedrock from Alluvial with Grouted Surface Casing*.

Monitoring Well Development and Sampling Procedures Monitoring wells would be developed for groundwater sampling. Well development and groundwater sampling would be conducted according to the following procedures: *GW 02 Well Development*, *GW 06 Field Measurement of Groundwater Field Parameters*, *FO 05 Handling of Purge and Development Water*, and *FO 07 Handling of Decontamination Water and Wash Water*.

Monitoring well development is the process by which the well drilling fluids and mobile particulates are removed from within and adjacent to newly installed wells. The objective of a complete well development is to provide groundwater inflow that is as physically- and chemically-representative of the aquifer as possible. Well development would be conducted as soon as possible after well installation, but no sooner than 48 hours after grouting and pad installation are completed. An inertial pump or bottom discharge/filling bailer would be used in development activities.

Water would be withdrawn from wells in small (e.g. quart, gallon) quantities over a period of time. Water samples would be analyzed for their constituents and disposed of in accordance with applicable procedures and regulations.

Well Abandonment In abandoning wells, a truck-mounted drill rig would be driven to each well site where access is favorable. The rig would be used to remove surface and well casings and adjacent geologic material. However, at some locations within the Industrial Area, space to operate a drill rig is limited. Therefore, wells in this situation would typically be abandoned in place, that is, the casing would not be removed from the well. Whether the casing is removed or left in place, all wells would be filled with bentonite grout to ensure that potentially contaminated water cannot move between water-bearing strata via the well. A 2-foot square concrete surface seal and metal marker would mark the location of the abandoned well.

Initiation of drilling activities is expected to begin in the summer of Calendar Year 1994, the estimated cost of the supplemental wells is \$200,000.

* * *

Categorical Exclusion to be Applied.

B3.1 Site characterization and environmental monitoring, including siting, construction, operation, and dismantlement or closing (abandonment) of characterization and monitoring devices and siting, construction, and operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis. Activities covered include, but

are not limited to, site characterization and environmental monitoring under CERCLA and RCRA. Specific activities include, but are not limited to

(a) Geological, geophysical (such as gravity, magnetic, electrical, seismic, and radar), geochemical, and engineering surveys and mapping, including the establishment of survey marks, (b) Installation and operation of field instruments, such as stream-gauging stations or flow-measuring devices, telemetry systems, geochemical monitoring tools, and geophysical exploration tools, (c) Drilling of wells for sampling or monitoring of groundwater or the vadose (unsaturated) zone, well logging, and installation of water-level recording devices in wells, (d) Aquifer response testing, (e) Installation and operation of ambient air monitoring equipment, (f) Sampling and characterization of water, soil, rock, or contaminants, (g) Sampling and characterization of water effluents, air emissions, or solid waste streams, (h) Installation and operation of meteorological towers and associated activities, including assessment of potential wind energy resources, (i) Sampling of flora or fauna, and (j) Archeological, historic, and cultural resource identification in compliance with 35 CFR part 800 and 43 CFR part 7

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DOE NEPA REGULATIONS SUBPART D
CATEGORICAL EXCLUSION DETERMINATION — RFO/CX00-94
Well Abandonment and Replacement Program (WARP) - FY94 Supplemental Wells

I have determined that the proposed action meets the requirements for a categorical exclusion as defined in Subpart D of 10 CFR 1021. Therefore, I approve the categorical exclusion of the proposed action from further NEPA review and documentation.

Date: _____

Signature: _____

M. N. Silverman

Title: Manager, Rocky Flats Office

I have reviewed this project description and have determined that it is accurate and appropriate.

Date: _____

Signature: _____

J. Dion

Title: DOE Program Sponsor

I have reviewed this determination and find that a categorical exclusion is the appropriate level of NEPA Documentation.

Date: _____

Signature: _____

Patricia M. Powell

Title: NEPA Compliance Officer

ADS # 6740

EC# 94-491

Work Package # 61203

Ecology & NEPA Division Reviewer's initials nlm